



What Is Seasonal Affective Disorder?

REVIEWED OCT 28, 2008

People with seasonal affective disorder (SAD) suffer from mood disorders related to the season or time of the year. SAD also may be referred to as “winter depression.” However, while most people with SAD experience onset of symptoms in the late fall or early winter, some experience symptoms in late spring or early summer. For these people, SAD also may be known as “summer depression.”

Clinical and scientific inquiry into the symptoms of SAD dates back more than 100 years. In the 1980s, clinical research began in earnest and many studies now appear in the literature. An Interior Health Authority survey of the scientific literature estimates that SAD occurs in about 6 percent of the population, with some 10 percent to 20 percent of the population experiencing milder forms. There is no question regarding the legitimacy or reality of the disorder.

While the specific biological mechanisms of the disorder remain unclear, SAD probably relates to the effect of seasonal light variation on humans—perhaps not unlike that of reproductive cycles and hibernation in some animals. Over the course of a year, the patterns and amount of available sunlight changes. Research has found that this causes changes in people’s circadian rhythms, or internal “biological clocks.” *The Diagnostic and Statistical Manual of Mental Disorders* Fourth Edition Text Revision (DSM-IV-TR), indicates that for people with SAD, these changes can disrupt their biological clocks and cause depressive symptoms and other related symptoms, including:

- weight gain
- increased sleeping
- decrease in activity level
- decrease in energy level
- difficulty thinking, concentrating or making decisions
- cravings for sugary or starchy (high carbohydrate) foods

People with the summer depression type of SAD may experience somewhat opposite symptoms—a decrease in appetite with a loss of weight and difficulty sleeping.

For a diagnosis of SAD, these symptoms must have occurred in the past 2 years with no non-seasonal depression episodes, and the seasonal episodes must far outnumber the non-seasonal episodes. January and February tend to be the most difficult months for people with winter-type SAD.

What causes seasonal affective disorder?

While no conclusive laboratory tests exist for SAD, melatonin has been linked to the disorder. Melatonin, a sleep-related hormone secreted in the brain, may cause symptoms of depression. The production of melatonin increases the more a person spends time in the dark.

Even though circadian rhythms also may play a role in SAD, so far research studies have not produced any consistent findings that indicate a direct, causal relationship. Some preliminary studies have examined brain imaging. And while it is too soon to reach any conclusions, initial findings suggest that people with winter-type SAD may have abnormalities in parts of their brains known as the prefrontal and parietal cortex areas, while people with summer-type SAD may have abnormalities in the orbital frontal cortex and the left inferior parietal lobule.

How common is seasonal affective disorder?

Research indicates that the occurrence of winter-type SAD may vary depending on the latitude at which a person lives, as well as sex and age. Specifically, the disorder is more common in higher latitudes—it is 7 times more common in Washington state than in Florida, and in Alaska, the prevalence rate is 8.9 percent, and higher for subsyndromal SAD, at 24.9 percent. It is also higher for women and among people in their 20s. Generally, estimates of the prevalence of the disorder range from 4 to 6 people out of 100, while 10 percent to 20 percent of the population may have milder forms of SAD. Some studies indicate that it usually doesn't start in people younger than age 20, however, one study found up to a 5 percent occurrence rate for children in Minnesota (albeit with fewer children experiencing a full depressive episode).

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